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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/880,648 06/23/97 MENDOLIA

G 027575-039

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LM02/0816

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EXAMINER

CRAVER, C

ART UNIT	PAPER NUMBER
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2744

DATE MAILED:

08/16/00

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/880,648

Applicant(s)
Mendolia

Examiner
Charles Craver

Group Art Unit
2744



☒ Responsive to communication(s) filed on Apr 3, 2000

☐ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-13 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-6 and 8-12 is/are rejected.

☒ Claim(s) 7 and 13 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rabe (of record) in view of Thornton, newly cited.

Concerning claims 1, 2, 8 and 10,

Rabe discloses a flip style cellular phone comprising:

a main housing (12);

a flip (16), pivotally mounted to the main housing by hinges (16H and 16H@, see also column 2 line 63 - column 3 line 1), the flip having a free end remote from the hinges;

a microphone (32) mounted in the main housing; and

an acoustic pipe or channel (26) extending from the free end of the flip to the hinged end to carry sound from said free end to said hinged end, wherein said channel has a sound inlet (24) at the free end of the flip, and wherein said channel partly extends along one of the peripheral edges of the flip (see figure 2 and element 28). Said channel or pipe is in acoustic communication with said microphone (see abstract), transmitting sound from the inlet to the microphone.

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Rabe does not, however, expressly disclose that the acoustic channel extends entirely along one of the peripheral edges of the flip.

However, Rabe does disclose that the cavity can be made in "other shapes and types" (column 3 lines 44-47), including but not limited to conic section-shaped cavities. Thornton discloses the utility of providing a triangular shaped acoustic pipe in a flip member of a portable phone (col 2 lines 20-39, col 3 line 63-col 4 line 28), which, as shown in figure 2, adjacent to the peripheral edge of the flip. While the cavity of Thornton does not extend completely along the edge of the flip, absent any critical teaching other than an aesthetic appearance as to the purpose of disposing the acoustic pipe on the periphery of the flip, as taught in applicant's specification, page 2 lines 6-11, there is no functional distinction between a cavity such as that taught by Thornton and one in which the outer edge of the cavity is disposed along a peripheral edge of the flip. As such, it would have been obvious to one skilled in the art at the time the invention was made to incorporate such a cavity shape, as taught by Thornton, into Rabe, and to further modify the acoustic pipe such that the cavity is disposed entirely along the peripheral edge of the flip, given the suggestion of cavities of "other shapes and types" by Rabe, as it would provide for the specific acoustic response needed by an invention such as that taught by Thornton; it is further noted that there must be an amount of flip material present between the flip edge and the cavity in order to maintain the integrity of the flip structure, and thus modifying the amount of material or distance from the flip edge to the cavity at one or both ends of the flip edge in such a manner

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would have been a routine engineering decision predicated on the specific acoustic response needed and the material used in the making of the flip.

Regarding claims 3 and 11, Rabe discloses a hollow hinge (16H@) connecting the acoustic channel to the microphone (column 3 lines 31-35).

Concerning claim 4, Rabe discloses an acoustic pipe providing a single acoustic pathway from the free end to the hinged end of the flip (see figure 2).

Further regarding claims 5, 9 and 12, Rabe disclosed above that the acoustic channel can be of "other shapes and types" (column 3 lines 44-47), which could construe an acoustic channel occupying the entire inside volume of the flip. An acoustic channel which occupies the entire inside volume of the flip, for example, would extend along the entire peripheral edge of the flip, as taught by claims 5 and 12, and would further be formed in the peripheral edge of the flip as taught by claim 9 of the present invention. Such a shape can be construed as anticipated by Rabe.

Regarding claim 6, Rabe disclosed above that said acoustic channel is in communication with said microphone.

Allowable Subject Matter

1. Claims 7 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Regarding claims 7 and 13, Rabe discloses a flip cellular phone, comprising a housing, a hinged flip, and an acoustic pipe extending along a peripheral edge of the flip from the free end to the hinged end for carrying sound, further comprising a microphone located nearer one end of the hinge, and wherein the microphone is located nearer one end of the hinge so that two acoustic paths of differing length exist to carry sound from the free end of the flip to the microphone.

While Rabe discloses one or more hollow hinge connections separably connectable acoustically to the acoustic channel (column 5 lines 31-40), and states the utility of mounting a microphone "in any convenient place within the radiophone unit by merely repositioning and/or extending the interconnecting acoustic path" (column 5 lines 4-6), it is neither taught nor suggested to make two acoustic paths of a differing length for such a purpose.

Response to Arguments

2. In view of the appeal brief filed on 4-3-2000, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (a) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (b) request reinstatement of the appeal.

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If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rabe '072 and '640 discuss acoustic cavity shapes in flip phones.

Frohlund discusses a right-triangle shaped cavity for a flip phone.

Ogasawara discusses a sound receiver for a portable telephone.

Takagi et al discusses an acoustic pipe for a cellular phone.

4. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications intended for entry)

Or:

(703) 305-9508 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Craver whose telephone number is (703) 305-3965.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost, can be reached on (703) 305-4778.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.



C. Craver
August 10, 2000

CHARLES CRAVER
PATENT EXAMINER



DWAYNE D. BOST
SUPERVISORY PATENT EXAMINER
GROUP 2700